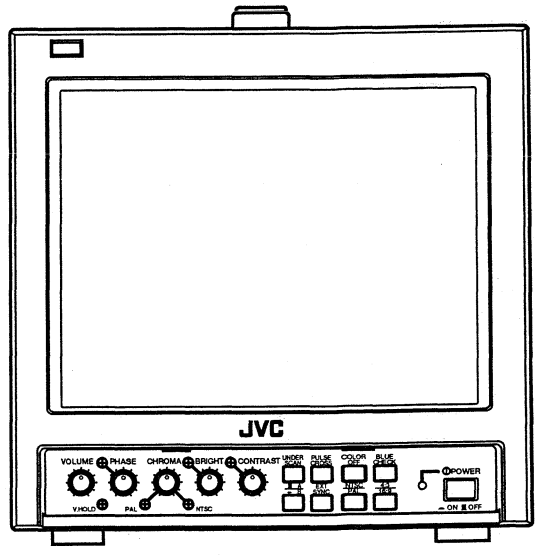
OPERATING INSTRUCTIONS (TM-1010PN / TM-1010PN-K)

JVC

COLOUR VIDEO MONITOR

TM-1010PN
TM-1010PN-K

INSTRUCTIONS



Thank you for purchasing this JVC colour video monitor. Before using it, read and follow all instructions carefully to take full advantage of the monitor's capabilities.

SAFETY PRECAUTIONS

In order to prevent any fatal accidents caused by misoperation or mishandling of the monitor, be fully aware of all the following precautions.

WARNINGS

To prevent fire or shock hazard, do not expose this monitor to rain or moisture.
Dangerous high voltages are present inside the unit.
Do not remove the back cover of the cabinet.
When servicing the monitor, contact qualified service personnel. Never try to service it yourself.

WARNING : THIS APPARATUS MUST BE EARTHED.

Machine Noise Information Ordinance 3. GSGV, January 18, 1991: The sound pressure level at the operator position is equal or less than 70 dB (A) according to ISO 7779.

Improper operations, in particular alteration of high voltage or changing the type of tube may result in x-ray emission of considerable dose. A unit altered in such a way no longer meets the standards of certification, and must therefore no longer be operated.

PRECAUTIONS

- Use only the power source specified on the unit.
- When not using this unit for a long period of time, or when cleaning it, be sure to disconnect the power plug from the AC outlet (or DC power plug from the DC battery).
- Do not allow anything to rest on the power cord.
  And do not place this unit where people will tread on the cord.
  Do not overload wall outlets or power cords as this can result in a fire or electric shock.
- Avoid using this unit under the following conditions:
  – in extremely hot, cold or humid places,
  – in dusty places,
  – near appliances generating strong magnetic fields,
  – in places subject to direct sunlight,
  – in badly ventilated places,
  – in automobiles with doors closed.
- Do not cover the ventilation slots while in operation as this could obstruct the required ventilation flow.
- When dust accumulates on the screen surface, clean it with a soft cloth.
- Unplug this unit from the AC outlet (or DC power plug from the DC battery) and refer servicing to qualified service personnel under the following conditions:
  – when the power cord is frayed or the plug is damaged,
  – if liquid has been spilled into the unit,
  – if the unit has been dropped or the cabinet has been damaged,
  – when the unit exhibits a distinct change in performance.
- Do not attempt to service this unit yourself as opening or removing covers may expose you to dangerous voltage or other hazards. Always refer servicing to qualified service personnel.
- When replacement parts are required, have the service personnel verify in writing that the replacement parts he/she uses have the same safety characteristics as the original parts. Use of manufacturer's specified replacement parts can prevent fire, shock, or other hazards.
- Upon completion of any servicing or repair work to this unit, please ask the service personnel to perform the safety check described in the manufacturer's service literature.
- When this unit reaches the end of its useful life, improper disposal could result in a picture tube implosion. Ask qualified service personnel to dispose of this unit.

SCREEN BURN

- It is not recommended to keep a certain still image displayed on screen for a long time as well as displaying extremely bright images on screen. This may cause a burning (sticking) phenomenon on the screen of cathode-ray tube. This problem does not occur as far as displaying normal video playback motion images.

POWER CONNECTION for TM-1010PN-K (U.K. only)

* The TM-1010PN-K power cord (for the United Kingdom) has a fuse built into the plug connecting to the AC outlet.

WARNING

DO NOT cut off the mains plug from this equipment.
If the plug fitted is not suitable for the power points in your home or the cable is too short to reach a power point, then obtain an appropriate safety approved extension lead or adaptor or consult your dealer.

If nonetheless the mains plug is cut off, remove the fuse and dispose of the plug immediately, to avoid a possible shock hazard by inadvertent connection to the mains supply.

If a new mains plug has to be fitted, then follow the instruction given below:

WARNING:

THIS APPARATUS MUST BE EARTHED.

IMPORTANT.

The wires in the mains lead on this product are coloured in accordance with the following code:

Green-and-yellow	: Earth
Blue	: Neutral
Brown	: Live

As these colours may not correspond with the coloured marking identifying the terminals in your plug, proceed as follows:

The wire which is coloured green-and-yellow must be connected to the terminal which is marked with the letter E or the safety earth symbol ⏚ or coloured green or green-and-yellow.

The wire which is coloured blue must be connected to the terminal which is marked with the letter N or coloured black.

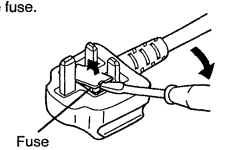
The wire which is coloured brown must be connected to the terminal which is marked with the letter L or coloured red.

When replacing the fuse, be sure to use only a correctly rated approved type, re-fit the fuse cover.

IF IN DOUBT — CONSULT A COMPETENT ELECTRICIAN.

How To Replace The Fuse

Open the fuse compartment with the blade screwdriver, and replace the fuse.



Fuse

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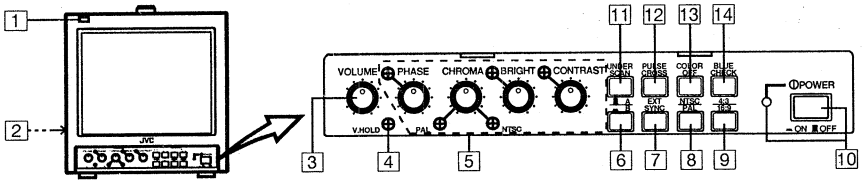
CONTROLS AND FEATURES

Front

<Front Panel>



1 Tally lamp
Indicates that a control signal is being received. The tally lamp functions when the control signal is input to the TALLY/REMOTE terminal on the rear panel.

2 Speaker
A built-in speaker is located inside the left side panel.

3 VOLUME control
Adjusts the speaker volume.

4 V.HOLD control
Use a small-bladed screwdriver to adjust the image's vertical stability.

5 Picture control section
PHASE, CHROMA, BRIGHT and CONTRAST controls are available.
The standard setting mode can be obtained by setting each control to the center click position. To adjust a setting, insert a small-bladed screwdriver into the space around the knob and turn it to the desired position. When adjusting, use the small-bladed screwdriver and insert it into the control hole around the required control knob.

- **PHASE control**
  Adjusts picture hue.
- **CHROMA control**
  Adjusts picture colour density.
- **BRIGHT control**
  Adjusts picture brightness.
- **CONTRAST control**
  Adjusts picture contrast.

Notes:

* The PHASE control is effective only in the NTSC colour system mode.
* The standard CHROMA setting can be adjusted to suit the NTSC or PAL colour system.

6 VIDEO A/B switch
Selects the video signal input to the video input terminals on the rear panel.
A (■) : Selects the video signal input to VIDEO A terminal.
B (▂) : Selects the video signal input to VIDEO B terminal.

Note:

* VIDEO B terminals include both Y/C (S-Video) and composite VIDEO terminals. Y/C inputs have priority.

7 EXT SYNC switch
Selects internal sync or external sync.
When using with the external sync, input the sync signal to the EXT SYNC terminal on the rear panel.
(■) : Internal sync
(▂) : External sync

8 NTSC/PAL switch
Selects the NTSC or PAL colour system.
NTSC (■) : For NTSC colour system.
PAL (▂) : For PAL colour system.

9 4 : 3/16 : 9 switch
Selects the aspect ratio (4:3 or 16:9) of the picture displayed on the screen.
(■) : 4 : 3
(▂) : 16 : 9

Note:

* When a 4:3 picture is viewed in the 16:9 mode, the size of the image is reduced vertically.

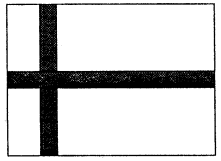
10 POWER switch/POWER indicator
Press this switch to turn the power on or off.
ON (▂) : Power is turned on and the power indicator lights.
OFF (■) : Power is turned off and the power indicator goes off.

Note:

* If the battery expires while the monitor is operated with DC power supply (the voltage level drops), the green indicator changes to orange, then to red. When the POWER indicator changes to red, the power automatically goes off. Make sure you switch off the power before replacing the battery.

11 UNDER SCAN switch
Selects the scanning mode (over scan screen or under scan screen).
(■) : Over scan screen
(▂) : Under scan screen

12 PULSE CROSS switch
Checks the retrace period (sync signal) by delaying the input signal.
(■) : Normal screen
(▂) : Retrace period display screen



13 COLOR OFF (colour off) switch
Selects the screen mode (colour or B/W). Useful when you want to check the white balance.
(■) : Colour screen
(▂) : B/W screen

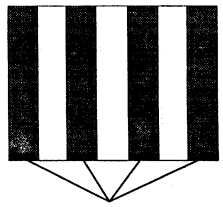
14 BLUE CHECK switch
Selects the screen mode (normal or monochrome blue screen). Useful when you want to check the chroma and phase adjustment.
(■) : Normal screen
(▂) : Monochrome blue screen

Note:

* The PHASE adjustment is effective only in the NTSC colour system mode.

[How to adjust]

1. Select the monochrome blue screen mode and input colour bar signals in the order of brightness.
2. Adjust the CHROMA and PHASE controls until the density and brightness of each blue bar are the same.



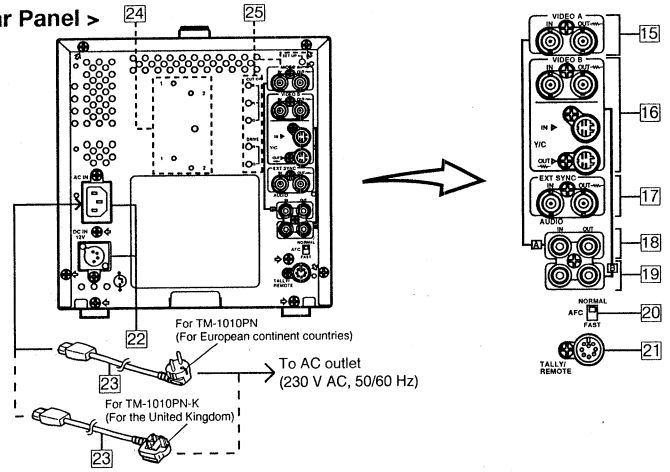
Adjust the blue bars to the same density and brightness.

(continued on the next page →)

CONTROLS AND FEATURES (cont'd)

Rear

< Rear Panel >



15 VIDEO A terminals

Video signal input (IN) and output (OUT) terminals.
The output terminal is bridge-connected.
IN : Video signal input terminal
OUT : Bridge-connected video signal output terminal

Notes:

* For corresponding audio signals, use the AUDIO A terminals 18.
* Also refer to the Basic Connection Example on page 8.

16 VIDEO B terminals

Video signal input (IN) and output (OUT) terminals for both composite and Y/C-separated (S-Video) terminals. Each output terminal is bridge-connected.

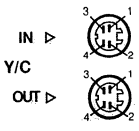
[BNC terminals]
IN : Video signal input terminal
OUT : Bridge-connected video signal output terminal

[Y/C (mini-DIN 4-pin) terminals]
IN : Y/C-separated (S-Video) signal input terminal
OUT : Bridge-connected Y/C signal output terminal

Notes:

* For corresponding audio signals, use the AUDIO B terminals 19.
* Y/C- terminal has priority.
* Also refer to the Basic Connection Example on page 8.

■ Y/C terminal pin layout



Pin No.	Signal
1	GND (Y)
2	GND (C)
3	Y
4	C

17 EXT SYNC terminals

External sync signal input (IN) and output (OUT) terminals.
The output terminal is bridge-connected.
IN : Input terminal for the external sync signal
OUT : Bridge-connected output terminal

Note:

* Also refer to the Basic Connection Example on page 8.

18 AUDIO A terminals

Input (IN) and output (OUT) terminals for the audio signal corresponding to the VIDEO A terminals 15.
The output terminal is bridge-connected.
IN : Audio input terminal
OUT : Bridge-connected output terminal

Note:

* For corresponding video signals, use the VIDEO A terminals 15.

19 AUDIO B terminals

Input (IN) and output (OUT) terminals for the audio signal corresponding to the VIDEO B terminals 16.
The output terminal is bridge-connected.
IN : Audio input terminal
OUT : Bridge-connected output terminal

Note:

* For corresponding video signals, use the VIDEO B terminals 16.

20 AFC switch

Selects the AFC (Automatic Frequency Control) time constant for the horizontal sync circuit.
Correct the skewed portion of the picture.
NORM position : Normal mode
FAST position : Fast mode (fast: smaller time constant)

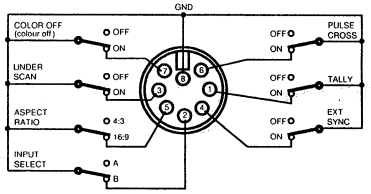
21 TALLY/REMOTE terminal

External control terminal (DIN 8-pin). Tally lamp, VIDEO A/B (input selection), Under Scan, External Sync, 4:3/16:9 (aspect ratio), Pulse Cross, and Colour Off modes can be controlled from an external unit.

Note:

* When you're controlling the monitor externally via the TALLY/REMOTE terminal, set all corresponding switches on the front panel to the OFF (■) position. (Whichever switch is pressed first has priority so remote switches may not function if the panel switches are ON (▬) position.)

■ TALLY/REMOTE terminal pin layout



Pin No.	Signal	
1	TALLY lamp	ON/OFF
2	INPUT SELECT (VIDEO A/B)	A/B
3	UNDER SCAN	ON/OFF
4	EXT SYNC (External Sync)	ON/OFF
5	ASPECT RATIO (4 : 3 /16 : 9)	4 : 3 /16 : 9
6	PULSE CROSS	ON/OFF
7	COLOR OFF (colour off)	ON/OFF
8	GND	

22 Power input connector

Supply power to either the AC IN or DC IN 12 V connector.

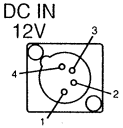
[AC IN]
Connect the provided AC power cord between the AC IN connector and an AC outlet (230 V AC, 50/60 Hz).

[DC IN 12V]
Connect the 12 V DC power plug to the DC IN 12V connector.

Notes:

* AC IN connector can function between 100 and 230 V AC, 50/60 Hz.
* See your dealer for more information on 12 V DC power supply.
* When both AC IN and DC IN connectors are used, the AC input has priority.
* The DC power supply does not automatically take over if an AC outlet is unplugged or the AC power is cut off when both AC and DC power supplies are connected. In this case, press the POWER switch to set to OFF, then press it again to turn the power ON.

■ DC IN 12V connector pin layout



Pin No.	Signal
1	GND
2	—
3	—
4	12 V DC

23 Power cord

Connect the provided power cord (230 V AC, 50/60 Hz) to the AC IN connector.

Notes:

* The TM-1010PN power cord is for use in European continent countries.
* The TM-1010PN-K power cord is for use in the United Kingdom only. (The power cord for the United Kingdom has a fuse built into the plug to the AC outlet.)

24 External battery mounting holes

Attach an external battery to either pair of holes (1 or 2) to use 12 V DC power (depending on the type of battery).

Notes:

* External batteries manufactured by PAG or Anton Bauer are available.
* See your dealer for details.

25 Switch/control adjustment holes for service personnel

For adjustment of SET UP switch, CUT OFF (B, R, G) control and DRIVE (R, G) control during servicing.

Note:

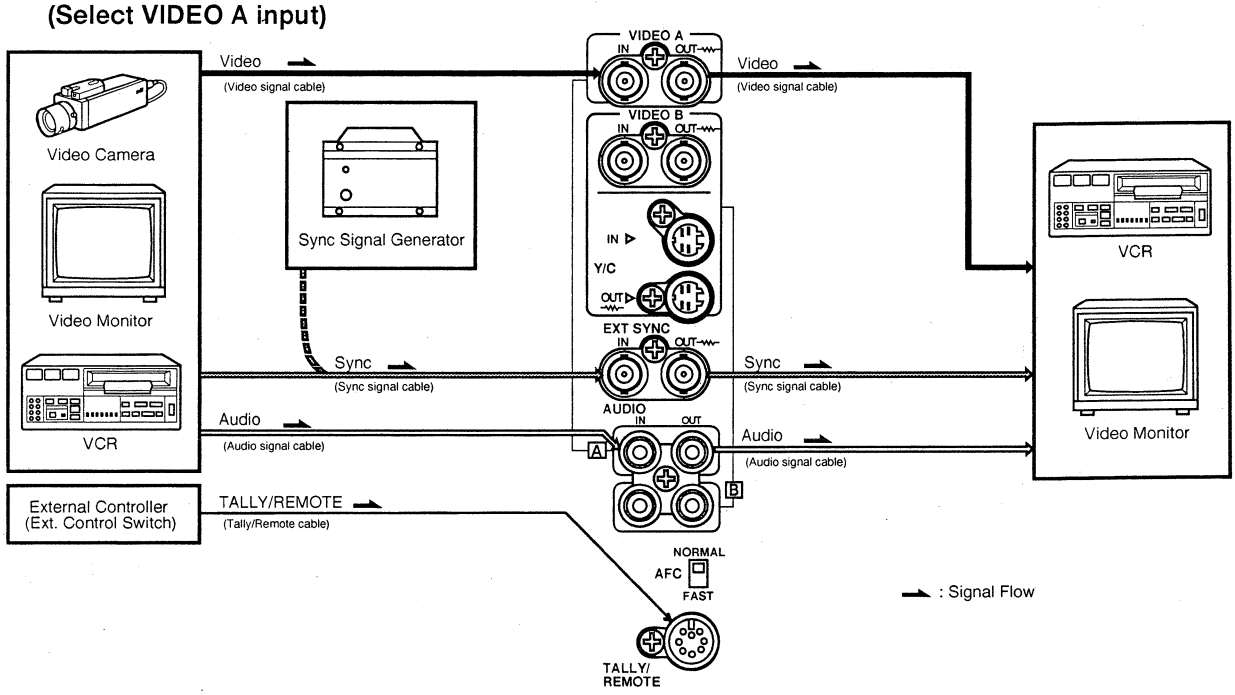
* These controls are exclusively for the use of service personnel. Do not attempt to adjust them yourself.

ENGLISH

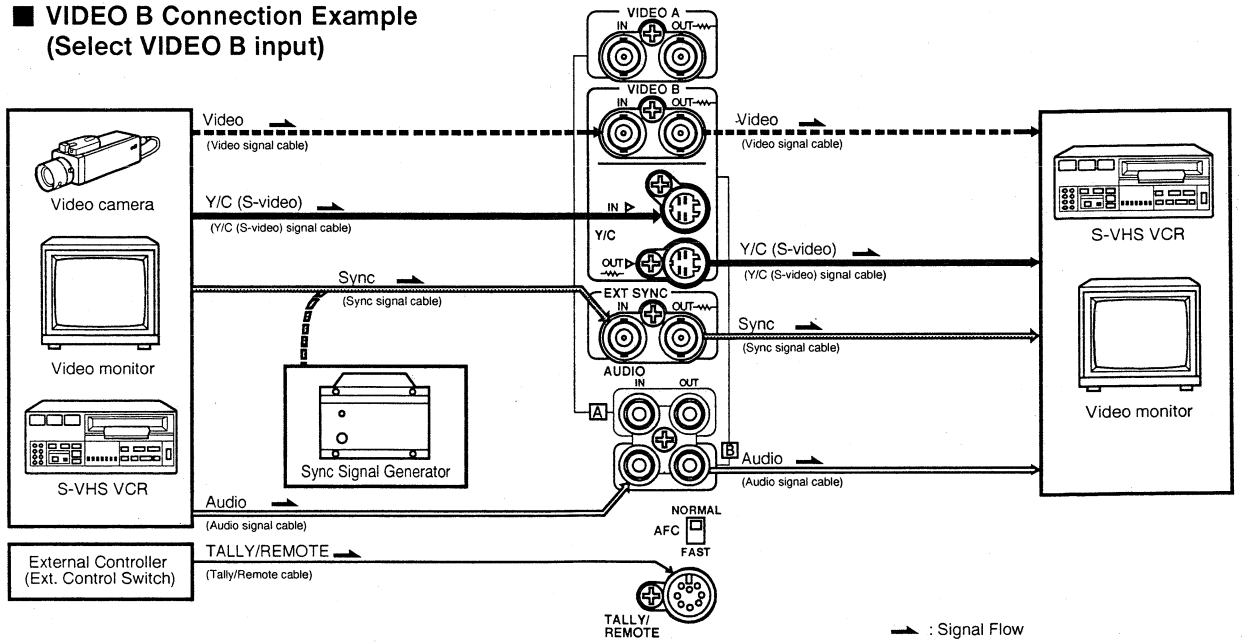
BASIC CONNECTION EXAMPLE

* Before connecting your system, make sure that all units are turned off.
* The illustration below shows some examples of different connections. Terminal connections may differ depending on the component connected. Be sure to refer to the instructions provided with the unit(s) you are connecting.
* Each pair of input (IN) and output (OUT) terminals are bridge-connected. Do not connect input and output terminals inversely.
* If you're not connecting any equipment to a bridged output (OUT) terminal, be sure not to connect any other cables to the bridged output (OUT) terminal as this will cause the terminating resistance switch to open (auto terminate function).
* When making a bridge connection, connect the input (IN) and output (OUT) terminals on the monitor to separate video components.
  (For example, if both terminals are connected to the same VCR, resonance may occur except during playback. This is caused by the same video signal "looping" between the VCRs, and is not a malfunction.)
* Select the video input (VIDEO A or VIDEO B) with the VIDEO A/B switch on the front panel.

■ VIDEO A Connection Example (Select VIDEO A input)



■ VIDEO B Connection Example (Select VIDEO B input)



TROUBLESHOOTING

Solutions to common problems related to your monitor are described here. If none of the solutions presented here solves the problem, unplug the monitor and consult a JVC-authorized dealer or service center for assistance.

Problems	Points to be checked	Measures
No power supply.	Is the AC or DC power plug loosened or disconnected?	Firmly insert the power plug.
	Is the battery fully charged (when using DC power)?	Charge the battery, or replace it with a charged battery. (Refer to the instructions provided with the battery.)
No picture with the power on.	Is the video signal output from the connected component?	Set the connected component correctly.
	Is the input signal selected properly?	Select the required video signal input with the VIDEO A/B switch. (See page 4.)
	Is the video cable disconnected?	Connect the video signal cable firmly. (See page 8.)
No sound.	Is the audio signal output from the connected component?	Set the connected component correctly.
	Is the volume output set at the minimum position?	Adjust the VOLUME control. (See page 4.)
	Is the audio cable disconnected?	Connect the audio signal cable firmly. (See page 8.)
Shaking picture.	Is the monitor close to a device generating a strong magnetic field (motor, transformer, etc.)?	Move the device away from the monitor until the picture stabilizes.
No colour, wrong colour, or dark picture.	Is the colour system selected properly?	Set the colour system correctly with the NTSC/PAL switch. (See page 4.)
	Is the COLOR OFF (colour off) switch set properly?	Set the COLOR OFF (colour off) switch to the OFF (▮) position. (See page 5.)
	Has the picture control setting (CONTRAST, BRIGHT, CHROMA or PHASE) been changed?	Set each picture control to the standard setting (center) position. (See page 4.)
Unnatural, irregularly coloured, or distorted picture.	Is the monitor close to a speaker, magnet or any other device generating a strong magnetic field?	Move the device away from the monitor and turn the monitor's power off. Wait at least 30 minutes, then turn the power on again.
Dark stripes at the top and bottom of the screen, picture vertically squeezed.	Is the aspect ratio set to 16:9 (▬)?	Press the 4:3/16:9 switch to restore the normal 4:3 mode (▮). (See page 4.)
Picture flows.	Is the EXT SYNC switch set properly?	Set the EXT SYNC switch properly. (See page 4.)
Front panel switches do not function.	Is the monitor being controlled by an external control unit via the TALLY/REMOTE terminal?	Set the control on the external unit of the same function as that on the monitor's front panel to the OFF (▮) position, or disconnect the unit from the TALLY/REMOTE terminal. (See page 7 and 8.)
External control not possible with the unit connected to TALLY/REMOTE terminal.	Is the switch on the front panel of the same function as that on the external control unit to the ON (▬) position?	Set the control on the front panel of the same function as that on the external control unit to the OFF (▮) position. (See pages 4, 5, 7 and 8.)

The following are not malfunctions:

- When a bright still image (such as a white cloth) is displayed for a long period, it may appear to be coloured. This is due to the structure of the cathode ray tube and will be deleted when another image is displayed.
- You experience a mild electric shock when you touch the picture tube. This phenomenon is due to a normal buildup of static electricity on the CRT and is not harmful.
- The monitor emits a strange sound when the room temperature changes suddenly. This is only a problem if an abnormality appears on the screen as well.

SPECIFICATIONS

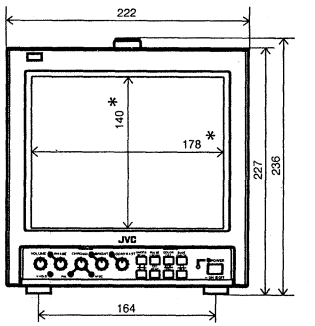
■ **Type**	:	Colour video monitor
■ **Colour system**	:	NTSC, PAL
■ **Picture tube**	:	25cm measured diagonally, flat-square type, 90° deflection, in-line gun, vertical line trio type (phosphor stripe pitch 0.5 mm)
■ **Effective screen size**	:	Width 175 mm Height 137 mm Diagonal 222 mm
■ **Scanning frequency**	:	(H) 15.734 kHz (NTSC) 15.625 kHz (PAL) (V) 59.94 Hz (NTSC) 50 Hz (PAL)
■ **Horizontal resolution**	:	280 TV lines or more (Y/C input mode)
■ **Input terminals**		
VIDEO A	:	Composite video: 1 line, BNC connector x 2, 1 Vp-p, 75 Ω, negative sync (bridge connection possible, auto termination)
VIDEO B	:	Composite video: 1 line, BNC connector x 2, 1 Vp-p, 75 Ω negative sync (bridge connection possible, auto termination) Y/C-separated: 1 line, mini-DIN 4-pin connector x 2 Y: 1.0 Vp-p, 75 Ω C: 0.286 Vp-p, 75 Ω (NTSC) 0.3 Vp-p, 75 Ω (PAL) (bridge connection possible, auto termination) * Y/C priority when both connected
AUDIO A	:	1 line (monaural), RCA pin x 2 0.5 V rms, high-impedance (bridge connection possible)
AUDIO B	:	1 line (monaural), RCA pin x 2 0.5 Vrms, high-impedance (bridge connection possible)
■ **External sync**	:	Composite sync 1 line, BNC connector x 2 **0.2 - 4 Vp-p, 75Ω** (bridge connection possible, auto termination)
■ **Tally/Remote**	:	1 line, DIN 8-pin x 1
■ **Audio power output**	:	1 W (monaural)
■ **Built-in speaker**	:	8 cm round x 1 impedance of 8 Ω
■ **Environmental conditions**	:	Operation temperature: 0 – 40 °C Operation humidity: 20 – 80% (non-condensing)
■ **Power requirements**	:	230 V AC, 50/ 60 Hz or 12 V DC * the possible range of AC IN function : 100 – 230 VAC, 50/60 Hz
■ **Power consumption**	:	0.41A (230 V AC) 3.5A (12 V DC)
■ **Dimensions**	:	Width 222 mm Height 236 mm Depth 317 mm
■ **Weight**	:	Approx. 7.4 kg
■ **Accessory**	:	AC power cord TM-1010PN: for European continent countries (approx. 2 m) x 1 TM-1010PN-K: for the United Kingdom (approx. 2 m) x 1

** Illustrations used in this manual are for explanatory purposes only. The appearance of the actual product may differ slightly.*
** E. & O. E. Design and specifications subject to change without notice.*

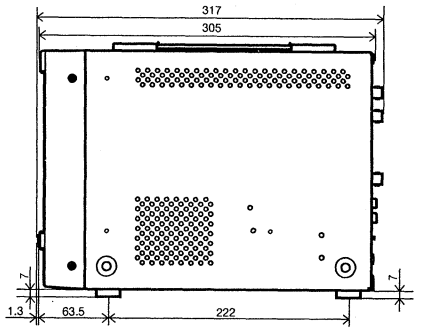
■ Dimensions

Unit : mm

< Front View >



< Side View >



* Asterisks (*) are used to indicate front panel dimensions.